

Data Center & Server room Data logging



Web Based Application

Assured Data Integrity

SMS/ Email Alerts as per
configured Hierarchy

Gap free Data recording

Comprehensive alarm
management & Audit trails.

Adheres to all the requirements of
21 CFR part 11 compliance.

Data center & server room monitoring recommended standards & best practices

- Standards recommended by ASHRAE, A1-A4 class data centers and server rooms (Application areas)

As defined by ASHRAE:

Class A1: Typically a data center with tightly controlled environmental parameters (dew point, temperature, and relative humidity) and mission critical operations; types of products typically designed for this environment are enterprise servers and storage products.

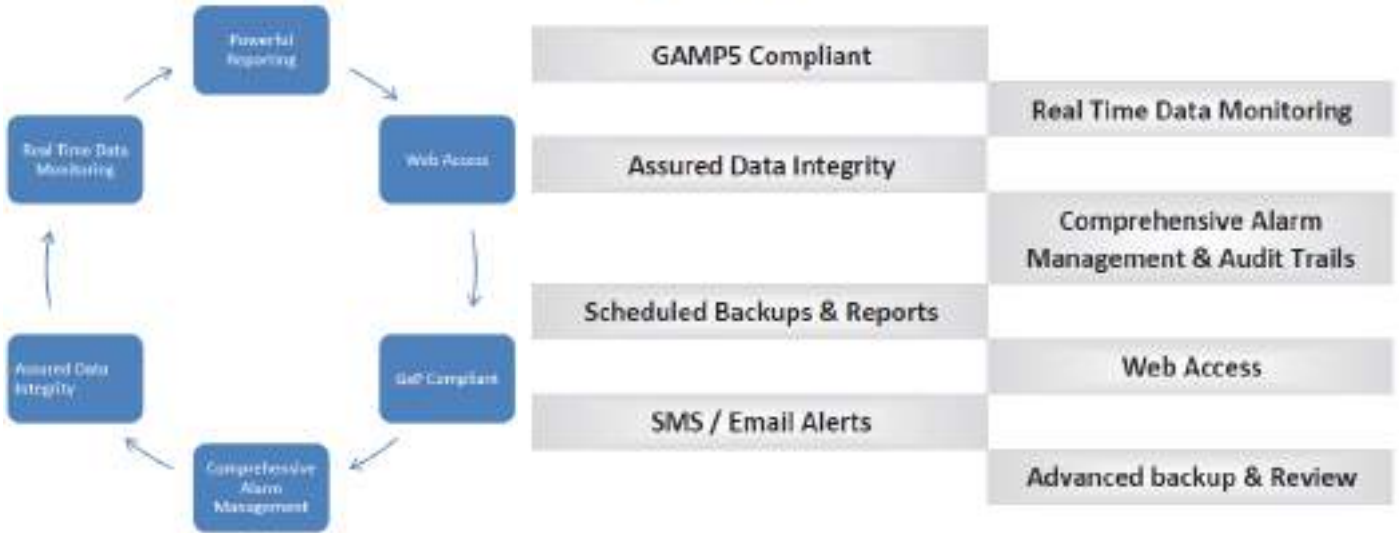
Class A2: Typically an information technology space or office or lab environment with some control of environmental parameters (dew point, temperature, and relative humidity); types of products typically designed for this environment are volume servers, storage products, personal computers, and workstations.

Class A3/A4: Typically an information technology space or office or lab environment with some control of environmental parameters (dew point, temperature, and relative humidity); types of products typically designed for this environment are volume servers, storage products, personal computers, and workstations.

Application.	Location Of Sensors.	Settings.
Ambient Room Humidity.		40% - 60% rH.
Ambient Room Temperature.	small rooms: center. data centers: potential hot zones.	18-27°C / 64-80°F.
HVAC & Airco Monitoring.	Next to each HVAC unit to monitor their working state.	settings depend on room to ensure 18-27°C temperature to rack and 40-60% rH at room level.
Rack Level Intake Temperature.	ASHRAE recommends 3 per rack: front (top, middle, bottom).	18-27°C / 64-80°F.
Rack Level Outtake Temperature.	ASHRAE recommends 3 per rack: back (top, middle, bottom).	less than 20°C / 35°F difference from inlet temperature (typically <40°C / 105°F).

- Environmental standards are provided for rack level monitoring and ambient monitoring
- Potential Hot zones near air conditioning units to detect failure of such systems.
- Temperature has to be maintained between should be between 18°-27°C and Humidity range is 40% and 60% RH
- If RH is not maintained too dry will result in the build up of static electricity on the systems. Too humid will cause corrosion and start slowly damaging the equipment resulting to permanent failure.
- Temperature monitoring is of utmost importance as a failing air conditioning unit will have a way faster impact on the systems lifetime and availability (fans stress, CPU overheating, ...) and running a Server room at higher temperatures may also affect non rack mounted equipment.

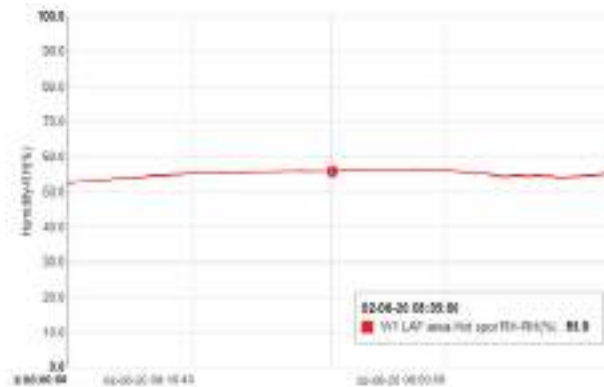
PISCADA - 21 CFR Compliant Web Based Datalogging Software



Dashboard



Graphical View



Alarms

From: 01-08-2020 17:00:04 To: 17-08-2020 17:00:04

Severity [T]	TimeStamp [T]	Source [T]
Warning	17-08-20 13:33:00	W1 LAF area Hot spot RH
Warning	17-08-20 16:40:00	W1 storage area Hot spot RH
Warning	08-08-20 04:34:00	W1 LAF area Hot spot RH
Warning	08-08-20 08:12:00	W1 storage area Hot spot RH
Warning	02-08-20 08:11:00	W1 LAF area Hot spot RH
Warning	12-08-20 08:09:00	W1 storage area Hot spot RH
Warning	02-08-20 08:23:00	W1 storage area Hot spot RH

User Management

User Management

Login Name [T]	Email [T]	Status [T]	Roles [T]
admin	admin@polmon.com	Active	Admin
operator		Active	Operator
WMS		Active	Operator
warehouse		Active	Operator
user1		Active	Operator
test		Active	Operator

Email Alerts

polsoft@polmon.com
to me →

15/05/2020 12:08:31 W1 storage area Hot spot T: Warning Deactivated, PV: 33.1C

polsoft@polmon.com
to me →

15/05/2020 12:01:00 W1 storage area Hot spot T: Warning PV: 33.1C

SMS Alerts

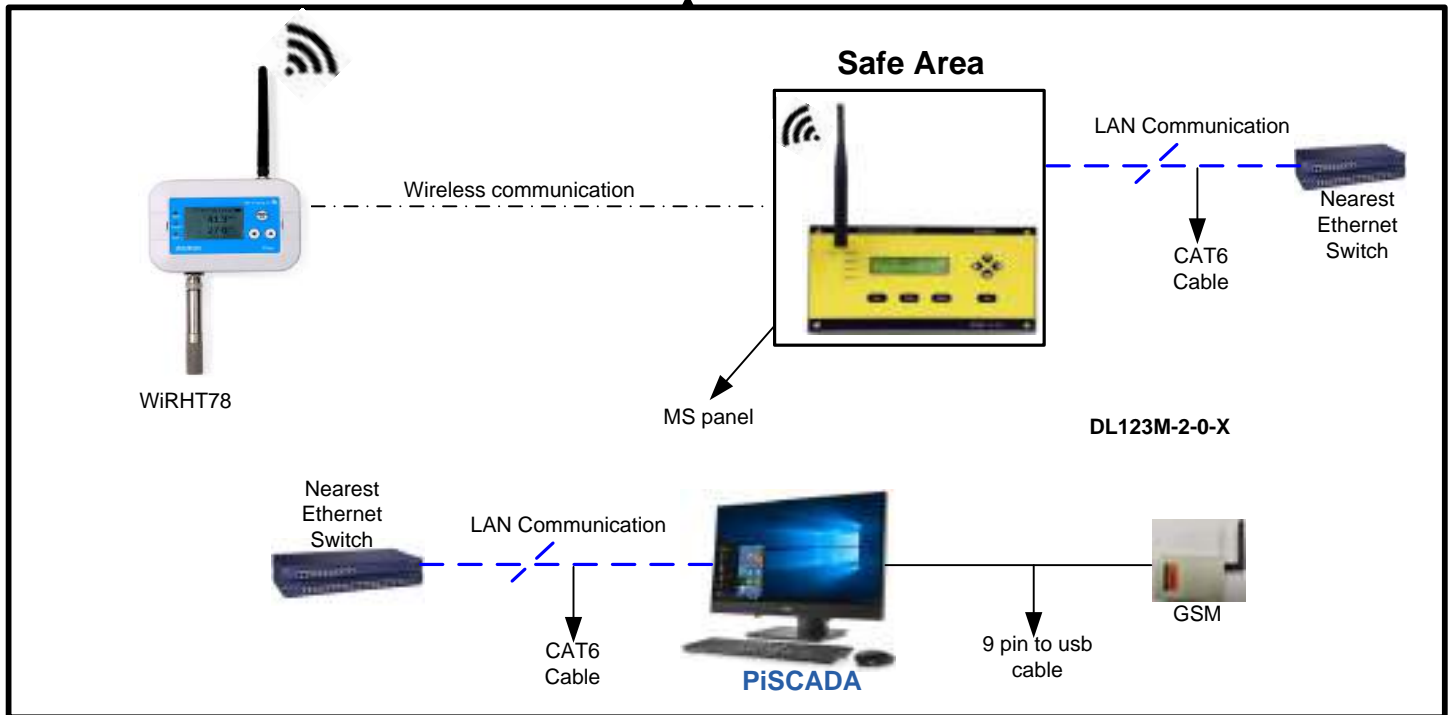
16/02/2020 14:43:00
W12 LAF1 area Hot spot T: HIGH, W12 LAF1 area Hot spot TPV: 30.5C

16/02/2020 14:47:00
W12 Storage area Cold spot T: HIGH, W12 Storage area Cold spot TPV: 30.2C

16/02/2020 15:06:00
W12 LAF1 area Hot spot T: Alarm Deactivated, PV: 30.0C

Wireless Architecture

IT server room



Wired Architecture

IT server room

